

Response

Applicant: David C. Collins

Serial No.: 10/820,952

Filed: April 8, 2004

Docket No.: 200400670-1

Title: GENERATING AND DISPLAYING SPATIALLY OFFSET SUB-FRAMES

REMARKS

The following remarks are made in response to the Office Action mailed Feb. 29, 2008. Claims 1-30 were rejected. Claims 1-30 remain pending in the application and are presented for reconsideration and allowance.

Double Patenting

Claims 1-30 are provisionally rejected on the ground of nonstatutory double patenting over:

1. Claims 1-29 of co-pending Application No. 10/821,130 in view of Super-Resolution Composition in Multi-Projector Displays” by Jaynes et al. (Jaynes);
2. Claims 1-29 of co-pending Application No. 10/864,125 in view of Jaynes;
3. Claims 1-25 of co-pending Application No. 10/868,638 in view of Jaynes;
4. Claims 1-29 of co-pending Application No. 10/868,719 in view of Jaynes;
5. Claims 1-27 of co-pending Application No. 10/992,926 in view of Jaynes;
6. Claims 1-32 of co-pending Application No. 10/750,591 in view of Jaynes;
7. Claims ???¹ of co-pending Application No. 10/697,605 in view of Jaynes;
8. Claims 1-42 of co-pending Application No. 10/696,888 in view of Jaynes;
9. Claims 1-33 of co-pending Application No. 10/821,135 in view of Jaynes;
10. Claims 1-24 of co-pending Application No. 10/632,042 in view of Jaynes;
11. Claims 1-20 of co-pending Application No. 10/672,544 in view of Jaynes;
12. Claims 1-30 of co-pending Application No. 10/768,621 in view of Jaynes;
13. Claims 1-32 of co-pending Application No. 10/768,215 in view of Jaynes;
14. Claims 1-30 of co-pending Application No. 10/947,762 in view of Jaynes; and

¹ The Office Action does not indicate which claims of co-pending Application No. 10/697,605, other than claim 1, form the basis of this rejection.

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15. Claims 1-26 of co-pending Application No. 10/996,083 in view of Jaynes.

Claims 1-30 are rejected on the ground of nonstatutory double patenting over:

1. Claims 1-33 of U.S. Patent No. 7,030,894 in view of Jaynes;
2. Claims 1-60 of U.S. Patent No. 7,034,811 in view of Jaynes; and
3. Claims 1-37 of U.S. Patent No. 7,109,981 in view of Jaynes.

As noted in the Office Action, none of the claims in the above applications or patents teaches the following features recited in claims 1-30 of the present application.

With regard to claim 1 and dependent claims 2-11, none of the claims in the above applications or patents recites:

generating first and second sub-frames, wherein the first and the second sub-frames comprise a plurality of sub-frame pixel values and a plurality of error values, and wherein at least a first one of the plurality of sub-frame pixel values is calculated using the image data, at least a second one of the plurality of sub-frame pixel values, and at least one of the plurality of error values;

alternating between displaying the first sub-frame, including displaying the first one of the plurality of sub-frame pixel values, in a first position and displaying the second sub-frame, including displaying the second one of the plurality of sub-frame pixel values, in a second position spatially offset from the first position.

With regard to claim 12 and dependent claims 13-19, none of the claims in the above applications or patents recites:

an image processing unit configured to generate first and second sub-frames comprising a plurality of rows of sub-frame pixel values, wherein each of the sub-frame pixel values in each of the plurality of rows is calculated using the image data, at least one sub-frame pixel value from a previous one of the plurality of rows, and at least one error value ...

With regard to claim 20 and dependent claims 21-24, none of the claims in the above applications or patents recites:

means for generating a sub-frame pixel value using the row of history values and error values and the plurality of rows of initial values.

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With regard to claim 25 and dependent claims 26-30, none of the claims in the above applications or patents recites:

generating a first sub-frame pixel value using the image data and the first plurality of initial values, wherein the first sub-frame pixel value comprises a first history value; ...

generating a second sub-frame pixel value using the image data, the second plurality of initial values, the first history value, and the first error value.

The Office Action cites Figure 4 and Equation 7 of Jaynes as a teaching or suggestion of the features of claims 1-30 that are not recited in the claims of the above applications or patents. Figure 4 of Jaynes “depicts the theoretical problem [of Jaynes] to be solved” (paragraph above Figure 4) without illustrating a solution to the problem as recited in claims 1-30. Accordingly, Figure 4 of Jaynes does not teach or suggest the above features of claims 1-30.

Equation 7 teaches away from the invention recited in claims 1-30 by teaching “an iterative algorithm that seeks to minimize the difference between the different components and the image target.” Jaynes paragraph above Figure 7 (emphasis added). The invention of claims 1-30 contemplates a one pass algorithm. For example, claim 1 recites “wherein at least a first one of the plurality of sub-frame pixel values is calculated using the image data, at least a second one of the plurality of sub-frame pixel values, and at least one of the plurality of error values” See also, Specification, p. 53, lines 4-6. Accordingly, Equation 7 of Jaynes also does not teach or suggest the above features of claims 1-30.

Because neither the claims of the above applications or patents nor Figure 4 or Equation 7 of Jaynes teach or suggest all of the features of claims 1-30, Applicants respectfully request the withdrawal of the non-statutory double patenting rejections of claims 1-30 for at least these reasons.

Claim Rejections under 35 U.S.C. § 103

Claims 1-30 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Application Publication Number 2004/0027363 (Allen) in view of “Super-Resolution Composition in Multi-Projector Displays” by Jaynes et al. (“Jaynes”).

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Applicant is filing herewith a Declaration under 37 C.F.R. 1.131 to swear behind Allen as prior art under 35 U.S.C. § 102(a). Applicants respectfully submit that, in view of the Declaration, Allen does not qualify as prior art a prior art reference under 35 U.S.C. § 102(a).

Allen and the present application were, at the time the invention of the present application was made, owned by or subject to an obligation of assignment to Hewlett-Packard Development Company, L.P. Allen was originally assigned to Hewlett-Packard Company (Reel/Frame 013561/0663) and was subsequently assigned to Hewlett-Packard Development Company, L.P. as recorded on June 8, 2003 (Reel/Frame 013776/0928). The present application was assigned to Hewlett-Packard Development Company, L.P. on April 7, 2004 (Reel/Frame 015203/0274). Applicants respectfully submit that, under 35 U.S.C. §103(c), Allen also does not qualify as a prior art reference under 35 U.S.C. § 102(e) for purposes of 35 U.S.C. §103(a).

Accordingly, Applicants respectfully request withdrawal of the rejections to claims 1-30 under 35 U.S.C. § 103(a).

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-30 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-30 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application. Any inquiry regarding this Amendment and Response should be directed to either Roger Greer at Telephone No. (312) 360-0080 or Christopher P. Kosh at Telephone No. (512) 241-2403, Facsimile No. (512) 241-2409. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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CPK:dmd

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